

REMARKS

A. Introduction

Claims 1, 4, 15-18, 23-31, 33 and 34 were pending and under consideration. Claims 2, 3, 5-14, 19-22, and 32 were previously cancelled.

In the Office Action of July 22, 2010, claims 1, 4, 15-18, 23-31, 33 and 34 were rejected. In the Advisory Action of October 28, 2010, the Examiner entered the prior response, but upheld these rejections.

With this response, claim 1 is amended.

B. Rejection under 35 USC §103

Claims 1, 4, 15-18, 23-28, 30, 31, 33 and 34 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP10-312789 to Inamasu ("Inamasu") in view of Moriguchi (U.S. Pat. No. 6,576,369) ("Moriguchi"). Applicant traverses this rejection for at least the following reasons.

Independent claims 1 and 4 presently require a mesophase carbon material that is sintered after being molded into a body of the non-aqueous electrolyte secondary cell.

Inamasu is limited to an anode with a binder and describes various binders for use with the anode. See JP10-312789, Paras. [0013]-[0014]. In the Office Action of January 13, 2010, the Examiner incorrectly states that Inamasu discloses electrodes which may include conductive agents, binders or filters. See, Office Action of January 13, 2010 at Page 4. This is a misinterpretation of Inamasu. Inamasu states:

"[0013]In this invention nonaqueous solid electrolyte cell, a conducting agent, a binding agent, a filler, etc. can be added as an electrode compound. It is [anything] good if it is a electron conductive material which does not have an adverse effect on battery capacity as a conducting agent. Usually, natural graphite (scaly graphite, earthy graphite, etc.), an artificial graphite, carbon black, Conductive materials, such as vacuum evaporation of acetylene black, Ketchen black, a carbon whisker, carbon fiber, metal powder (copper, nickel, iron, silver, gold, etc.) and a metal fiber, and metal and electrically-conductive-ceramics material, can be included as one sort or those mixtures. As for the addition, 1 to 50 weight % is preferred, and its 2 to 30 weight % is especially preferred." See, JP10-312789, Para. [0013] (emphasis added).

Inamasu then proceeds to list appropriate binders to use in the anode by stating:

"[0014]As a binding agent, usually Tetrafluoroethylene, polyvinylidene

fluoride, Polyethylene, polypropylene, ethylene-propylene JIENTA polymer (EPDM), Polymer, polysaccharide, etc. which have thermoplastics, such as sulfonation EPDM, styrene butadiene rubber (SBR), fluorocarbon rubber, and carboxymethyl cellulose, and rubber elasticity can be used as one sort or two sorts or more of mixtures. what the binding agent which has a functional group which reacts to lithium like polysaccharide is methylated, for example, and the functional group is deactivated for -- ** -- better. As the addition, 1 to 50 weight % is preferred, and 2 to 30 weight % is especially preferred." See, JP10-312789, Para. [0014] (emphasis added).

Further, the examples disclosed in Inamasu all include a binder. See, See, JP10-312789, Para. [0030]-[0031]. Therefore Inamasu discloses which materials can be mixed together, but **does not disclose that one of the components of the mixture may be omitted** as the Examiner alleges. Consequently, Inamasu fails to disclose or fairly suggest a binderless anode having a carbon that is sintered after being molded into a body of the non-aqueous electrolyte secondary cell, as required by independent claims 1 and 4, and is, therefore, unable to provide the aforementioned benefits of the present general inventive concept.

Moriguchi, similarly, fails to disclose a mesophase carbon material that is sintered after being molded into a body of the non-aqueous electrolyte secondary cell. Instead, Moriguchi discloses forming an electrode including graphite powder and no binder. See, U.S. Pat. No. 6,576,369, Col. 15, l. 31-36. Nowhere does Moriguchi disclose forming an electrode with a mesophase carbon material and no binder.

As the Applicant's specification discloses, a mesophase carbon material that is sintered after being molded into a body of the non-aqueous electrolyte secondary cell provides an increased anode active material filling density such that the anode has a large reaction area, thereby improving cell energy density and charge/discharge efficiency. See, 2005/0053835, Paras. [0033]-[0034].

Accordingly, independent claims 1 and 4 are patentable over Inamasu and Moriguchi and withdrawal of these rejections and allowance of these claims are earnestly solicited. Likewise, claims 15-18, 23-31, 33 and 34 depending from independent claims 1 or 4 include all of the limitations of these independent claims and are allowable over the art of record for at least the same reasons discussed above with respect to these independent claims.

D. Conclusion

It is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, there being no other objections or rejections, this application is in condition for allowance. Notice to that effect is requested.

If any further fees are required in connection with the filing of this amendment, please charge the same to our Deposit Account No. 19-3140.

Respectfully submitted,
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